



IN THE SPECIFICATION

Please replace paragraph 0001 of the Specification with the following:

[0001] This application is a continuation-in-part of U.S. Application No. 10/662,249, entitled "Process And System For Removing Heavies From Diluent Recycled To A Slurry Polymerization Reactor," filed September 15, 2003, which claims the benefit under 35 U.S.C. § 119(e) of U.S. Provisional Application No. 60/411,254, entitled "Process And System For Removing Heavies From Diluent Recycled To A Slurry Polymerization Reactor," filed September 16, 2002. This application is also a continuation-in-part of U.S. Application No. 10/662,260 (~~Attorney Docket No. 13830US01~~), entitled "Process And Apparatus For Separating Diluent From Polymer Solids", filed September 15, 2003, which claims the benefit under 35 U.S.C. § 119(e) of U.S. Provisional Application No. [/] 60/411,255, entitled "Process And Apparatus For Separating Diluent From Polymer Solids," filed on September 16, 2002. The specification and claims of each patent and patent application identified in this paragraph are hereby incorporated herein by reference to provide continuity of disclosure.

Please replace paragraph 0043 with the following:

[0043] The recycle tank 30 can be equipped with an escape valve 31 for lights. If lights build up in the recycle tank 30, the valve will open and direct gas via line 62 to a fractionation column (e.g., column 32) where lights are separated from diluent and removed from the system. [—]By limiting the feed from the recycle tank to fractionation to the overhead vapor in the recycle tank, the amount of hydrocarbon fluids passed to fractionation is greatly reduced. Indeed, most hydrocarbon fluid separated from the effluent slurry withdrawn from the polymerization reactor will not be passed to fractionation but rather will be recycled to the reactor without fractionation. An advantage from this is that less fractionation is performed and smaller fractionation columns may be used for a given amount of hydrocarbon fluids withdrawn from the reactor. From the fractionation columns 32 and 34 relatively pure hydrocarbon fluid is passed to the olefin-free surge tank 36. The olefin free surge tank 36 receives diluent that has been passed through the

fractionation columns and as a result is essentially free of both lights and heavies. Since the diluent is essentially free of olefin monomer, it is suitable for passing through olefin-free diluent line 37 to the catalyst feed tank 12 for making catalyst slurry or catalyst mud. However, olefin-free diluent in excess of that desired for making catalyst slurry or catalyst mud can be passed back to the recycle tank 30 via valve 41 and line 39 for recycling to the reactor 14. Furthermore, most of the diluent is not passed to fractionation, but rather is recycled to the reactor without fractionation. This permits minimizing the size of the fractionation equipment. It also avoids unnecessary separation of monomer from diluent.

Please replace paragraph 0044 with the following:

[0044] FIG. 2 shows a system comprising a purge column, a hydrocarbon/purge gas recovery unit, a recycle tank, and fractionation columns. An effluent slurry taken off from the polymerization reactor enters line 254 and proceeds to flow through line 254 so as to be heated by flashline heater 216 prior to its introduction to flash gas separator 218. Flash gas separator 218 is operated at a pressure hereafter referred to as the first flash pressure. The first flash pressure is preferably about 10 psia higher than what is hereafter referred to as the first fractionation pressure, or that pressure at which the first fractionation stage operates. The first fractionation stage includes fractionation column 232. A substantial portion of liquid in the effluent slurry is flashed to vapor before or in flash gas separator 218, and the small difference between the first flash pressure and the first fractionation pressure induces the flow of such vapor through line 256 to cyclone (or other type of filter device) collector 264 and also the flow of vapor from cyclone collector 264 to column 232 via line 257. The flash gas separator 218 can be replaced with a cyclone. The vapor stream which has been vaporized either in the flashline 254 and/or in the flash gas separator 218 is also referred to herein as the first vapor stream. A vapor stream exits cyclone 264 and travels through vapor removal line 257 to condenser 229. The first vapor stream is passed through the flash gas condenser 229, which may condense, or liquefy, the diluent. The condensed stream is passed to recycle tank 230. Recycle tank 230 is equipped with an escape valve 231 for volatile materials which may be sent to the column 232 via line 262.

Recycle tank 230 serves as a vapor-liquid separation drum, and liquids may be pumped directly back to the loop reactor through line 246.

Please replace paragraph 0046 with the following:

[0046] Polymer solids and residual liquid (that liquid not vaporized in flash tank 218) are passed from flash tank 218 to purge column 224 by means of a valve 221, surge vessel 222 which is allowed to fill with polymer solids periodically during the sequence, and another valve 223. Valves 221 and 223 are operated by a sequencing controller which is not shown. Polymer solids then pass into purge column 224 which uses a purge gas to separate hydrocarbon fluids from polymer solids. The purge gas and hydrocarbon fluids are separated in hydrocarbon/purge gas recovery unit 228. Operation of the hydrocarbon/purge gas recovery unit is described more fully in connection with FIG. 3. Hydrocarbon from the recovering unit 228, preferably in liquid form are transferred through line 253 to the recycle tank 230 and/or through line 255 to the first fractionation column 232, through first and/or second hydrocarbon paths, respectively.